

# Effects of developmental fluoxetine exposure on neurobehavioral outcomes

Citation for published version (APA):

Rayen, I. (2013). *Effects of developmental fluoxetine exposure on neurobehavioral outcomes*. [Doctoral Thesis, Maastricht University]. Maastricht University. <https://doi.org/10.26481/dis.20131023ir>

## Document status and date:

Published: 01/01/2013

## DOI:

[10.26481/dis.20131023ir](https://doi.org/10.26481/dis.20131023ir)

## Document Version:

Publisher's PDF, also known as Version of record

## Please check the document version of this publication:

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## **Statements**

**Belonging to the PhD thesis**

### **Effects of developmental fluoxetine exposure on neurobehavioral outcomes**

**Ine Rayen**

**Maastricht, 23<sup>rd</sup> of October 2013**

1. Serotonin plays a role in the development and function of the HPA axis, and therefore changes in serotonin levels, via developmental SSRI exposure, will likely affect HPA axis function. (this thesis)
2. Developmental exposure to fluoxetine has significant long-term effects on components of the HPA axis with decreased serum corticosterone levels, and a reduction in GR and GRIP1 expression in the hippocampus. (this thesis)
3. Developmental fluoxetine exposure differentially affects long-term neuroplasticity in male and female offspring, and these effects differ in the presence of prenatal maternal stress. (this thesis)
4. Developmental fluoxetine exposure inhibits sexual behavior in male offspring, but facilitates sexual behavior in female offspring. (this thesis)
5. Serotonin is a key player in the development and modulation of the HPA system, hippocampal plasticity, affect-related behaviors, and sexual differentiation of the brain and behavior. (this thesis)
6. Simplicity is hidden in the most complex things.
7. A scientist is like a good wine, it needs time to mature.
8. Success is not final, failure is not fatal: it is the courage to continue that counts. (Winston Churchill)
9. Intelligence is the ability to adapt to change. (Stephen Hawking)
10. Antidepressants sure kill your sexual life... Now, that's depressing! (Ozzy Osbourne)

# **Stellingen**

## **Behorende tot het proefschrift**

### **Effects of developmental fluoxetine exposure on neurobehavioral outcomes**

**Ine Rayen**

**Maastricht, 23 oktober 2013**

1. Serotonine speelt een rol in de ontwikkeling en functie van de HPA as, waardoor veranderingen in serotonine concentraties, als gevolg van SSRI blootstelling tijdens de ontwikkeling, waarschijnlijk effect hebben op de functie van de HPA as. (dit proefschrift)
2. Fluoxetine blootstelling tijdens de ontwikkeling heeft significante lange termijn effecten op componenten van de HPA as, door verlaging van corticosterone concentraties en door een daling van de GR en GRIP1 expressie in de hippocampus. (dit proefschrift)
3. Fluoxetine blootstelling tijdens de ontwikkeling heeft een verschillend effect op de lange termijn neuroplasticiteit in mannelijke en vrouwelijke nakomelingen en deze effecten zijn anders in de aanwezigheid van prenatale stress. (dit proefschrift)
4. Fluoxetine blootstelling tijdens de ontwikkeling remt seksueel gedrag in mannelijke nakomelingen, maar stimuleert seksueel gedrag in vrouwelijke nakomelingen. (dit proefschrift)
5. Serotonine is een belangrijke component in de ontwikkeling en modulatie van het HPA systeem, plasticiteit in de hippocampus, affectie-gerelateerd gedrag en seksuele differentiatie van de hersenen en gedrag. (dit proefschrift)
6. Simpliciteit zit verborgen in de meest complexe zaken.
7. Een wetenschapper is zoals een goede wijn, het heeft tijd nodig om te rijpen.
8. Succes is niet eindig, falen is niet fataal: het is de moed om door te gaan die telt. (Winston Churchill)
9. Intelligentie is de mogelijkheid om aan te passen aan verandering. (Stephen Hawking)
10. Antidepressiva verpesten zeker uw seksleven... Dat is pas deprimerend! (Ozzy Osbourne)